A2 encl

die to overfilling of the microscope objective entrance pupil. Additionally, a binary matrix pattern may be preferred for certain applications.--

**In the Claims:**

Please amend the claims without prejudice, without admission, without surrender of subject matter, and without any intention of creating any estoppel as to equivalents as follows:

Sub C1 A3

1. (Amended) A confocal microscope comprising:

at least one probe section insertable into a body for illuminating a region of interest thereof;

an imaging section generating illumination light, and constructing images from light remitted from the region of interest; and

at least one flexible incoherent optical coupling element for transmission of light between the imaging section and the probe section, whereby the confocal microscope is a remote probe for confocal imaging of tissue at locations within the body in place of an endoscope.

Sub C3 A4

6. (Amended) A confocal microscope comprising:

at least one probe section insertable into a body having an objective lens;

a light manipulation section; and

at least one fiber bundle coupling between the light manipulation section and the objective lens, wherein the fiber bundle scrambles light incident to said fiber bundle ,whereby the confocal microscope is a remote probe for confocal imaging of tissue at locations within the body in place of an endoscope.

8. (Amended) The microscope according to claim 6 wherein the fiber bundle is not coherent in that spatial individual fibers at one of said ends of the bundle are scrambled relative to that at the other of said ends.

15. (Amended) A method for decoding a scrambled image formed by an incoherent fiber bundle in a microscope insertable into a body comprising the steps of :

raster scanning a focused light spot onto a first end of the fiber bundle;

sequentially reading out a corresponding fiber at a second end of said bundle; and

constructing a map of the first and second ends, whereby an image formed by light remitted into the second end can be unscrambled by the mapped relationship of the first and second ends.

16. (Amended) A method for decoding a scrambled image formed by a first incoherent fiber bundle in a microscope comprising the steps of :

raster scanning a focused light spot onto a first end of the first fiber bundle;

sequentially reading out the corresponding fiber at a second end of said bundle; and

decoding the scrambled image formed by said first fiber bundle with a second incoherent fiber bundle.

17. (Amended) A method for decoding a scrambled image formed by an incoherent fiber bundle in a microscope insertable into a body comprising the steps of:

illuminating a first end of the incoherent fiber bundle with a coded line pattern;

imaging corresponding fibers at a second end of said bundle; and

mapping of the first and second ends, whereby an image formed by light remitted into the second end can be unscrambled by a mapped relationship of the first and second ends.

19. (Amended) A method for decoding a scrambled image formed by a first incoherent fiber bundle in a microscope comprising the steps of:

illuminating a first end of a first incoherent fiber bundle with a coded line pattern;

imaging the corresponding fibers at a second end of said bundle; and

decoding the scrambled image formed by said first fiber bundle with a second incoherent fiber bundle.

Please add the following new claims 20-25:

20. (New) The method according to claim 16, wherein the microscope is insertable.

21. (New) The method according to claim 17, wherein the coded line pattern is spatially coded.

22. (New) The method according to claim 17, wherein the coded line pattern is color-coded.

23. (New) The method according to claim 19, wherein the coded line pattern is spatially coded.

24. (New) The method according to claim 19, wherein the coded line pattern is color-coded.

25. (New) The method according to claim 19, wherein the microscope is insertable.